

Board of State Examiners of Electricians Licensure Candidate Information

1/12/2005

Introduction:

This Bulletin details the requirements as well as the process for achieving licensure. Candidates are eligible for the two-part examination when their application and supporting documentation are approved. In order to be approved for examination by the Board of State Examiners of Electricians as a Master or Journeyman Electrician, Systems Contractor or Systems Technician, candidates must have the required apprenticeship experience and education. The Board has contracted with PSI to process applications and to conduct the examinations. Hence there are many references to PSI in this Bulletin.

Frequently Asked Questions and Answers:

- 1. Where are the examinations given? See Part I- (Page 1) Preparing for Examination.
- 2. Who is responsible for documenting my apprenticeship hours? Part II (Page 5) Apprentice Work Experience.
- 3. What types of examinations are given? What will I be tested on? See Preparing for examination (Page 1) and Examinations (Page 5).
- 4. Are there special testing accommodations for candidates with disabilities? See Part II -(Page 3) Americans with Disabilities Act.
- 5. What is the examination process? What are the fees for the examinations? See Examination Process (Page 2) and Fees Part V (Page 9).
- 6. What is the passing score for each part of the two-part examination? See Part V- (Page 3) Examinations.
- What materials are allowed in the examinations? Part IV

 (Page 3) Items allowed/ used as an aid during an examination.
- 8. Will I be penalized for tabbing, highlighting, underlining or handwritten notes in books? See Part IV- (Page 3) Items allowed/used as an aid during an examination.
- 9. When will I be notified that I have passed or failed an examination? See Part V (Page 3) Scores.
- 10. How can I get help on

- Reviewing Questions-See Part I- (Page 4) Request for Review of Questions
- Making an Appeal- See Part I- (Page 4) Examination Appeal
- Reviewing Scores- See Part I- (Page 4) Review of Examination Score
- Refunds and Penalties- See Part IV- (page 8)
- 11. When am I considered licensed to work in the business of electrical and or security and fire alarms? You are considered licensed to install for hire when:
 - a. You have received notice of a passing score on each part of your examination and;
 - b. You have in your possession a printed, photo license issued from the Board or a temporary license.
- 12. When will the examinations be based on NEW code editions or amendments? All examination items are based on the edition of the electrical code currently in effect. Changes in examination items, directly related to acceptance of a promulgated code (NFPA 70/ MEC 527.CMR 12.00) by the Board of Fire Prevention will not affect any examination items for six months of the effective date of the new regulation. If you are testing in several months, check for updated versions of this bulletin that might reflect examination changes.
- 13. Are there any additional requirements to install security alarm systems? YES! Anyone who installs Security Alarm systems is required to obtain a Security Clearance Certificate from the Department of Public Safety in addition to being licensed. Applications may be obtained by calling the Board of Electricians office or the Department of Public Safety:

Board of State Examiners of Electricians

239 Causeway Street, Suite 500 Boston, MA 02114 (617) 727-9931

Department of Public Safety 1 Ashburton Place, Room 1301 Boston MA 02108 (617) 727-3200

Preparing for an Examination

Part I.

General:

The examinations are administered at the PSI examination centers listed below:

Boston

Inner Tech Park, 56 Roland St., Suite 211

Boston, MA 02129

FROM NORTH: TAKE I-93 SOUTH. EXIT 28 - BOSTON/SULLIVAN

SQ./CHARLESTOWN. MERGE INTO MYSTIC AVE. TAKE I-93S
WWW.PSIEXAMS.COM



RAMP TO BOSTON/SULLIVAN SQ./CHARLESTOWN (take ramp do not get on highway). MAKE SLIGHT LEFT TURN ON TO MAFFA WAY. MAKE SLIGHT RIGHT TURN ON TO CAMBRIDGE STREET. AT FIRST TRAFFIC LIGHT, MAKE LEFT ON TO CARTER STREET - THERE IS A SIGN FOR INNER TECH PARK. RIGHT ON TO ROLAND STREET. END AT 56 ROLAND STREET (BUILDING ON LEFT, PARKING LOT ON RIGHT). ENTER THROUGH NORTH LOBBY.

FROM SOUTH: TAKE I-93 NORTH. EXIT 28 - RT 99/SULLIVAN SQ./SOMERVILLE. MAKE LEFT ON TO CAMBRIDGE STREET. AT FIRST TRAFFIC LIGHT, MAKE LEFT ON TO CARTER STREET - THERE IS A SIGN FOR INNER TECH PARK. RIGHT ON TO ROLAND STREET. END AT 56 ROLAND STREET (BUILDING ON LEFT, PARKING LOT ON RIGHT). ENTER THROUGH NORTH LOBBY.

Site is also accessible by Public Transportation to Sullivan Square. The Orange Line and many buses stop here. Walking from Sullivan Station: Make a right on to Cambridge Street. About 1/4 mile on the left is Carter Street (will pass a Dunkin Donuts and Hess Gas station on left). There is a sign for Inner Tech Park. Right on Roland St. Enter through North Lobby.

Fall River

218 South Main St, Suite 105 Fall River, MA 02721

From the North take Rte. 24S to 79S. Take Route 138S Exit. Bear right off exit. Go left at first traffic light. Take left at the second traffic light (top of hill) onto So Main St. 218 is 2 blocks down on the right. Parking: Go past 218 SO Main to 2nd light. Take right. Take another right at next traffic light. Third St parking Garage is on your right.

From the East 195 West. Take 138 S / Ma 79 S exit 5 toward N Tiverton RI (.3 miles). Follow Route 138 S toward N Tiverton RI (.1 miles). Merge right. Take Broadway Exit. Turn left at 1st light on Columbia St. Turn left at 2nd light to So Main St. Site is 2 blocks on the right.

Springfield

1111 Elm Street, Suite 32A West Springfield, MA 01089

Going East on Mass Pike (Rt. 90). Take Exit 4 - West Springfield/Holyoke. Turn right on West Springfield/Rt. 5 South. Continue on Rt. 5 approximately two miles. Turn right on Elm St. - immediately after Showcase Cinemas. Office is approximately 1/4 mile on the right.

Going West on Mass Pike (Rt. 90). Take Exit 4 - West Springfield/Holyoke. Follow as above.

Going South on Rt. 91. Take West Springfield/Route 5 Exit. Continue on Rt. 5 for approximately 1/2 mile. Turn right on Elm St. - immediately after Showcase Cinemas. Office is approximately 1/4 mile on the right.

Going North on Rt. 91. Take West Springfield/Route 5 South Exit. Continue on Rt. 5. Follow as above.

On the day of the examination, you should arrive at least 30 minutes before your appointment. This extra time is for sign-in, identification, and familiarizing yourself with the examination process. If you arrive late, you will not be

admitted to the examination site and you will forfeit your examination administration fee.

Part II.

Type/Class of Licenses:

 Massachusetts requires all applicants to pass an examination for the following categories of licensure: Master Electrician (Class A), Journeyman electrician (Class B), Systems Contractor (Class C) or Systems Technician (Class D) license.

Taking Consecutive Examinations:

 As a matter of preference, you may choose to sit for both parts of an examination on the same day. Applicants who choose to take both parts will immediately continue onto the second part of the examination. Once you enter a second part of an exam you will not be able to return to the first. You must complete one part of the examination in order to proceed to the next part.

Separate Examination Dates:

 As a matter of preference, you may choose to sit for only one part of your examination and then return on another date to take the next part of your examination.

Part III.

Re-examination:

 Applicants who have failed an examination or part thereof MUST wait 10-days from the last examination date to sit for re- examination.

Mail or call:

PSI Examination Services
3210 E Tropicana Ave Attn: MA EL
Las Vegas, NV 89121
(800) 733-9267 • Fax (702) 932-2666
www.psiexams.com

NOTE 1. : See Required Renewal of Application Forms Part V (Page 8).

Part IV.

Identification of Candidates:

You must provide 2 forms of identification. One must be a VALID form of government issued identification (driver's license, state ID or passport), which bears your signature and has your photograph or a complete physical description. The other must have your signature and preprinted legal name. All identification must match the Examination Registration Form and your Registration Confirmation Notice.

Note: If you cannot provide the required identification, you must call (800) 733-9267 at least 3 weeks prior to your scheduled appointment to arrange a way to meet this security requirement. Failure to provide all of the required identification at the time of the examination without notifying PSI is considered a missed appointment, and you will not be able to take the examination.

The Examination Process

Part I.

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Eligibility and Examination Registration:



- Eligibility for examination is to be determined by the Board of State Examiners and its' vendor, PSI.
- When your application has been approved, PSI will email or mail you an <u>Examination Authorization Notice</u>, along with information about scheduling your examination.
 - NOTE 1. Prior to taking examination: It is the applicant's responsibility to immediately notify PSI, in writing of any change in information on your previously submitted application.
- If your application is deemed incomplete or unqualified, PSI will return your original application, any additional documentation, examination fee and MA license fee to you for completion. Enclosed will be a notice explaining why your application could not be approved.

Part II.

Americans with Disabilities Act (ADA):

• If you require special accommodations, under the Americans with Disabilities Act (ADA), please contact PSI at (800)733-9267 or the Board office at (617)727-9931 to obtain an Accommodation Request Form. All examination centers are equipped to provide access in accordance with the Americans with Disabilities Act (ADA) of 1990, and every reasonable accommodation will be made in meeting a candidate's needs. Requests for any special accommodations should be made in writing, describing the specific accommodations that will be needed, and requests must include supporting documentation from a licensed professional. All requests for special testing arrangements must be made when the candidate registers for the examination with PSI.

Part III.

Admission/ Security to the Examination Area:

The following security procedures will apply during the examination:

- Cell phones, pagers, and guests are not allowed in the examination site. This policy is strictly enforced.
- No smoking, eating, or drinking will be allowed in the examination site.
- Copying or communicating examination content is a violation of PSI security policy and State Law. Either will result in the disqualification of examination results and may lead to legal action.
- Any individual papers that are not part of a paper-back, ring-binder, spiral binder or loose leaf binder type of book, or part of a multi-paged CMR, MGL, UL, or NFPA document as described in this section MUST be removed prior to entering the examination area. Failure to comply with this may result in disqualification and forfeiture of all fees.
 - NOTE 1. Please see the following section for a list of "items that may be used as an aid during an actual examination"
 - NOTE 2. Items not on this list are not allowed in the examination area.

Part IV.

Items allowed/ used as an aid during an actual examination

- Calculator- only non-programmable, non-printing, silent, battery-operated, non-alphabet keys.
 - Code-Book- The current, adopted edition of the National Electrical code-book whether paper-back, ring-binder, a spiral binder or loose leaf, tabbed or un-tabbed, that contains highlighted sections and or underlined sections or paragraphs of the original text of said book is allowed in the examination area for examination purposes.
 - Massachusetts State Amendment- The current, adopted edition of the Massachusetts State Amendments whether a separate document or part of the National Electrical Code book, in or a paper-back book provided by PSI, tabbed or un-tabbed, that contains highlighted sections and or underlined sections or paragraphs of the original text of said document is allowed in the examination area for examination purposes.
 - Massachusetts General Laws- All Massachusetts General Laws applicable to examination questions whether a separate document or part of the National Electrical Code book, or in a paper-back book provided by PSI, tabbed or un-tabbed, that contains highlighted sections and or underlined sections or paragraphs of the original text of said document is allowed in the examination area for examination purposes.
 - Board Rules and Regulations- A copy of the Boards Rules and Regulation (237CMR 11.00- 23.00) whether a separate document or in a paper-back book provided by PSI, tabbed or un-tabbed, that contains highlighted sections and or underlined sections or paragraphs of the original text of said document is allowed in the examination area for examination purposes.
 - National Fire Alarm Code- A copy of the National Fire Alarm Code (NFPA-72) whether paper-back, ring-binder, a spiral binder or loose leaf, tabbed or un-tabbed, that contains highlighted sections and or underlined sections or paragraphs of the original text of said book is allowed in the examination area for examination purposes.
 - OSHA and Safety and Health Standards; Overtime Compensation Fair Labor Standards Law; Lien Law; Worker Compensation Law; State Unemployment Law; Employer's Tax Guide - A copy of each of the aforementioned publications - whether in paper-back, ring-binder, spiral binder or loose leaf, tabbed or untabbed, provided by PSI; that contains highlighted sections and or underlined sections or paragraphs of the original text of said publication - is allowed in the examination area for examination purposes.
 - Formulas- prior to examination written on the blank pages of your codebook.
 - Written notes- prior to examination Hand written notes in the margins of the aforementioned reference materials.
 - During the examination only writing on the scrap paper that is provided by PSI will be allowed during the exam.

Part V.

Scores:

Your scores will be based on the number of questions you answered correctly. A passing score is a MINIMUM of 70% on each part See Examinations (pages 5-8).



- At the end of the examination all candidates will receive a printed Score Report.
- Veterans as defined in clause forty-three of section seven of chapter four shall be granted a credit of five percent to each part of the examination. DD214 must be submitted with application.

Score Report:

- If you did not pass the examination, a Score Report will indicate your overall score and the number of questions answered correctly on each major section of the examination. This information may help you prepare for reexamination.
- This detail is not shown on your Score Report if you received a passing score.
- If for some reason the Score Report can not be printed after you have completed your examination, PSI will mail such report within 10-days of your examination date.

Reviews and Appeals

Part I.

Review of Examination Score:

- An Examination Score report shall be given to candidates, on site, for no additional charge after completing their respective examination or part thereof. Your Examination Score report will state whether you have passed or failed and explain what part(s) of your examination you failed, showing your strengths and weaknesses in content areas. It will also inform you of your right to review the questions that you answered incorrectly on your examination. A request to review examination questions shall be made to PSI within 30-days from the date of examination. See Review of Question in the following section.
 - NOTE 1. If you need an extra copy of your Examination Score Report such a request must be made within 30-days of the date of examination at no cost to you. After 30-days, you can write to PSI to request a duplicate of your score report for up to 1 year after your examination. The fee for a duplicate score report is \$15. *Money Order or cashier's check ONLY*.

Important: If an appeal, review of questions or review of score results in a change of score from failing to passing, candidates will be required to update their application to show any changes in information in their initial application. See Part V Required Renewal of Application Forms on page 8.

Request for Review of Questions:

- Failing candidates will review their examination in a secure environment and may challenge any questions or answers that they feel should be eliminated, changed, or given credit.
- A Request for a Review of Questions shall be made to PSI within 30-days from your examination date or the date you received your score. Failure to make such a request within the time allotted may jeopardize your right to review the examination questions.
- Candidates may register for the examination review via Automated Telephone, Internet, Mail or Fax and Pay by Money

Order, Cashier's Check, VISA or MasterCard. Personal or company checks are <u>not</u> accepted. <u>The fee for this service is the same as the cost of reexamination</u>. <u>See Reexamination Fees on Page 9.</u>

- During the review you will be presented with the questions you answered incorrectly and the correct answer to those questions. The purpose of the review is to allow you to self-research the question to determine why the answer you selected was incorrect. If you feel that there is an error in the question, you may comment about the question during the review by writing down comments on the Test Question Review sheet.
- All comments together with a copy of the challenged test questions will be submitted directly to PSI's test development staff for review. PSI will contact you within 20 business days if your status changed from fail to pass, and a new score report will be issued. Most test questions are determined to be correct as presented on the examination, so do NOT wait for a response before preparing for and scheduling for re examination.

You are not permitted to take any notes outside of the review sessions. Please call (800) 733-9267 with any questions.

Examination Appeal:

• If after an exam review PSI maintained their failing score and you still disagree with their findings you may file an appeal before the Board. The appeal shall be made in writing to the Board of Electricians within 30-days of the date on your rejection notice from PSI. In your appeal you must state the items/questions that are to be reviewed. Failure to make such a request within the time allotted may jeopardize your right to an appeal.

Mail To: Board of State Examiners Examination Appeal
Attn: Executive Director
239 Causeway Street, suite 500
Boston, MA 02114
(617) 727-9931 • Fax - (617) 727-5012

Part II.

Applications for Examination:

 Applications for examination may be requested from PSI. Such request may be made by phone, fax, mail (postal services). Additionally, all applications may be downloaded, e-mailed as an attachment and or printed from the Board's and PSI's web sites:

> www.mass.gov/reg/boards/el/forms.htm www.psiexams.com PSI Examination Services 3210 E Tropicana Ave Las Vegas, NV 89121 (800) 733-9267 • Fax (702) 932-2666

Scheduling:

 Once applications are approved, candidates are responsible for contacting PSI to schedule an appointment to take the examination. For the fast and convenient test scheduling, PSI recommends candidates schedule their exams online by accessing PSI's registration website at www.psiexams.com 24 hours a day.



2. You may also schedule your examination touch- tone phone 24hours a day at (800) 733-9267. To schedule with a PSI registrar, call Monday through Friday, between 9:00 a.m. and 8:00 p.m., Eastern Time. If space is available in the examination site of your choice, you may schedule an examination 1 day prior to the examination date of your choice, up to 7:00pm ET. PSI will make every effort to schedule the examination site and time that is most convenient for you. Please be prepared to offer alternate examination appointment choices.

Apprentice Work Experience:

- Apprentice work experience is the actual hours worked under the direct supervision of a licensed person as covered in the Board's Rules and Regulations (237 CMR 12.00- 23.00).
 All Apprentices must have their employer complete a Board approved form herein referenced as an "Employment Verification Form".
 All hours of experience shall be documented on this form including overtime and signed by the responsible under pains and penalties of perjury.
- It is the apprentice's responsibility to contact his or her employer, present and past, to acquire the above information. If an employer fails to complete an "Employment Verification form" for an apprentice, the Apprentice may file a complaint against the licensee responsible for documenting his hours. However, this should ONLY be done after receipt of the Employment Verification Form has been confirmed by his or her employer or agent and; that a reasonable time was allowed for the employer to comply with such request.
- An "Employment Verification Form" is enclosed with your initial application package. One form per employer

Education:

 A Specific Form called "Certificate of School Experience" is provided for vocational-technical school attendees. This form is enclosed with your initial application package and may also be available at vocational-technical schools.

Part III.

Examinations:

• Examinations are OPEN BOOK, computer generated and two part. Examination scores are stand alone scores, i.e. each part of the examination is independent but necessary. Candidates who fail one part of an examination are only required to retake the part of the examination that they failed. However, all candidates are required to sit and pass each part of the examination for licensure.

Master Electrician, Part 1

# of Questions	% Required to Pass	Time Allowed
80	70% (56 questions answered correctly)	240 Minutes

Content Outline

Sub	ject Area	# of
Jub	Jeet Area	<i>"</i> OI

	Items
State Specific Electrical Requirements	4
General Knowledge	6
Services	11
Grounding and Bonding	10
Wiring Methods and Devices	15
Motors	7
Transformers	1
Low-Voltage Distribution	2
Special Occupancies and Equipment	10
Overcurrent Protection	6
Lighting	2
Alarm Systems	6

Reference List

All the reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge, or general industry practices. Except for Codebooks, you can use later editions of references as they become available. For Code questions, the examination will be based only on the edition of the Codebook that is listed.

Only the following references are <u>allowed</u> in the examination center:

NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005.

- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- NFPA 72 National Fire Alarm Code -, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- Massachusetts Electrical Code, 527 CMR 12.00 State Amendments to 2002 NEC Board of Fire Prevention Regulations.

www.mass.gov/dfs/osfm/fireprevention/cmr/index.htm

Additional Examination questions may be derived from the following reference materials. Please note these reference materials are not allowed in the Examination center.

- Ugly's Electrical References, 2002, Burleson Distributing Corp., 3501 Oak Forest Drive, Houston, TX 77018, (800)531-1660
- American Electricians' Handbook 14th edition, 2002, McGraw-Hill, P.O. Box 182605, Columbus, OH 43218-2605, www.McGraw-hill.com

Business and Law (Master Electrician and Systems Contractor Part II)

# of Questions	% Required to Pass	Time Allowed
50	70% (35 questions answered correctly)	120 Minutes

Content Outline





Subject Area	# of Items
Massachusetts Licensing	16
Estimating and Bidding	4
Lien Law	1
Financial Management	3
Tax Laws	3
Labor Laws	3
Project Management	3
Contracts	6
Business Organization	2
Risk Management	4
Environmental and Safety	5

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Only the following references are <u>allowed</u> in the examination center:

- Construction Management Guide: Basic Business and Project Management for Contractors, 4th Edition, 2003, NASCLA, POB 14941, Scottsdale, AZ 85267, (480) 948-3363, www.nascla.org
- 237 CMR 12 23 Rules and Regulations of the Board of State Examiners of Electricians, State House Book Store, Rm 116, Boston, MA 02133, (617) 727-2834, www.mass.gov/reg/boards/el/cmr.htm
- General Laws of Massachusetts, MGL Chapter 141, Supervision of Electricians, www.mass.gov/legis/laws/mgl/gl-141-toc.htm
- Massachusetts Inspection of Buildings, Inspection and Regulation of, and Licenses for, Buildings, Elevators and Cinematographs, MGL Chapter 143 Sections 3L, 3P and 50, www.mass.gov/legis/laws/mgl/gl-143-toc.htm
- Massachusetts Lien Law, Liens on Buildings and Land, 2003, MGL Chapter 254 Sections 1, 2, 2A, 2B, 4, 5, 8, 11, 13, 15A, 22 and 26, www.mass.gov/legis/laws/mgl/gl-54toc.htm
- Massachusetts Overtime or Minimum Wage Law, MGL Chapter 151, Minimum Fair Wages, Sections 1, 1A, 1B, 2, 3, 9, 10, 11, 15, 16,17, 19, 20, 20A and 21, www.mass.gov/legis/laws/mgl/ql-151-toc.htm
- Massachusetts Workers' Compensation law, MGL Chapter 152 Sections 6, 21, 22, 25A, 25C, 26, 27, 27A,28, 66, 67, 75A and 75B, www.mass.gov/legis/laws/mgl/gl-152toc.htm
- Massachusetts State Unemployment Law, Simplifying the Employment and Training Law: A Guide for Employers www.detma.org/pdf/smpbook2.pdf
- Code of Federal Regulations Title 29, Part 1926 (OSHA) 2002, ---OR----PSI, OSHA Excerpts 2003, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954- (888)293-6498, http://bookstore.gpo.gov ---OR----PSI, 3210 E Tropicana, Las Vegas, NV 89121, (see order form at the end of this bulletin).



# of Questions	% Required to Pass	Time Allowed
70	70% (49 questions answered correctly)	180 Minutes

Content Outline

Subject Area	#	of
Subject Area		
General Knowledge	8	
Services	11	
Grounding and Bonding	7	
Wiring Methods and Devices	18	
Motors	4	
Transformers	1	
Low-Voltage Distribution	2	
Special Occupancies and Equipment	5	
Overcurrent Protection	6	
Lighting	2	
Alarm Systems	6	

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All the reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge, or general industry practices. Except for Codebooks, you can use later editions of references as they become available. For Code questions, the examination will be based only on the edition of the Codebook that is listed.

Only the following references are <u>allowed</u> in the examination center:

NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005

- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- NFPA 72 National Fire Alarm Code -, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org

Journeyman Electrician, Part II, Applied portion

# of Questions	% Required to Pass	Time Allowed
30	70% (21 questions answered correctly)	60 Minutes

Content Outline

Subject Area	# of Items
Circuit Calculations (Ohm's Law)	5
Electrical Schematics and Plans	5
Materials and Components	6
Troubleshooting and Testing	6



Massachusetts Amendments	6
Licensing Laws and Regulations	2

Reference List

All the reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge, or general industry practices. Except for Codebooks, you can use later editions of references as they become available. For Code questions, the examination will be based only on the edition of the Codebook that is listed.

Only the following references are <u>allowed</u> in the examination center:

NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005

- Massachusetts Electrical Code, 527 CMR 12.00 State Amendments to 2002 NEC Board of Fire Prevention Regulations, State of Massachusetts General Laws, www.mass.gov/dfs/osfm/fireprevention/cmr/index.htm
- 237 CMR 12.00-23.00 Rules and Regulations of the Board of State Examiners of Electricians State House Book Store, Rm 116, Boston, MA 02133, (617) 727-2834, www.mass.gov/reg/boards/el/cmr.htm
- MGL Chapter 141, Supervision of Electricians, www.mass.gov/legis/laws/mgl/gl-141-toc.htm
- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org

Additional Examination questions may be derived from the following reference materials. Please note these reference materials are not allowed in the Examination center.

- Ugly's Electrical References, 2002, Burleson Distributing Corp., 3501 Oak Forest Drive, Houston, TX 77018, (800)531-1660
- American Electricians' Handbook 14th edition, 2002, McGraw-Hill, P.O. Box 182605, Columbus, OH 43218-2605, www.McGraw-hill.com

Systems Contractor Part I

# of Questions	% Required to Pass	Time Allowed
70	70% (49 questions answered correctly)	180 Minutes

Content Outline

Subject Area	# of Items
General Electric and Electronic Theory and Knowledge	9
NEC Alarm Requirements	15
Intrusion Detection and Notification	15
Fire Detection and Notification	31

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NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005

- Massachusetts Electrical Code, 527 CMR 12.00 State Amendments to 2002 NEC Board of Fire Prevention Regulations, State of Massachusetts General Laws, www.mass.gov/dfs/osfm/fireprevention/cmr/index.htm
- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-9101, (617)770-3000, www.nfpa.
- NFPA 72 National Fire Alarm Code -, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org

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- American Electricians' Handbook 14th edition, 2002, McGraw-Hill, P.O. Box 182605, Columbus, OH 43218-2605, www.McGraw-hill.com
- Fire Alarm Signaling Systems Handbook, 1994, 2nd edition, Bukowski & O'Laughlin, National Fire Protection Association, 1 Batterymarch, Quincy, MA 02269-9101, 6177703000, www.nfpa.org
- Certified Alarm Technicians Manual Level 1, 2001, National Training School, 8300 Colesville Rd, Suite 750, Silver Spring, MD 20910, 888-702-1687, www.alarm.org
- Understanding and Servicing Alarm Systems Third Edition, 0-7506-7206-4, Butterworth-Heinemann (Reed Publishing), 313 Washington Street Newton, MA 02158-1626, www.bh.com

Systems Technician Part I

# of Questions	% Required to Pass	Time Allowed
50	70% (35 questions answered correctly)	120 Minutes

Content Outline

Subject Area	# of Items
NEC Alarm Requirements	20
Fire Detection and Notification	30



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Only the following references are <u>allowed</u> in the examination center:

NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005

- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- NFPA 72 National Fire Alarm Code -, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org

Systems Technician Part II (Applied)

# of Questions	% Required to Pass	Time Allowed
30	70% (21 questions	60 Minutes
30	answered correctly)	oo wiiilates

Content Outline

Subject Area	# of Items
Circuit Calculations (Ohm's Law)	6
Electrical Schematics and Plans	6
Materials and Components	8
Troubleshooting and Testing	8
Licensing Laws and Regulations	2

Reference List

All the reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge, or general industry practices. Except for Codebooks, you can use later editions of references as they become available. For Code questions, the examination will be based only on the edition of the Codebook that is listed.

Only the following references are <u>allowed</u> in the examination center:

NOTE: Examinations will be based upon the 2005 National Electrical Code and Massachusetts Electrical Code Amendments after July 1, 2005

 Massachusetts Electrical Code, 527 CMR 12.00 State Amendments to 2002 NEC Board of Fire Prevention Regulations, State of Massachusetts General Laws, www.mass.gov/dfs/osfm/fireprevention/cmr/index.htm

- 237 CMR 12.00-23.00 Rules and Regulations of the Board of State Examiners of Electricians, State House Book Store, Rm 116, Boston, MA 02133, (617) 727-2834, www.mass.gov/reg/boards/el/cmr.htm
- National Electrical Code, 2002, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- MGL Chapter 141, Supervision of Electricians, www.mass.gov/legis/laws/mgl/gl-141-toc.htm

Additional Examination questions may be derived from the following reference materials. Please note these reference materials are not allowed in the Examination center.

- Ugly's Electrical References, 2002, Burleson Distributing Corp., 3501 Oak Forest Drive, Houston, TX 77018, (800)531-1660
- American Electricians' Handbook 14th edition, 2002, McGraw-Hill, P.O. Box 182605, Columbus, OH 43218-2605, www.McGraw-hill.com
- Fire Alarm Signaling Systems Handbook, 1994, 2nd edition, Bukowski & O'Laughlin, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471, (617)770-3000, www.nfpa.org
- Certified Alarm Technicians Manual Level 1, 2001, National Training School, 8300 Colesville Rd, Suite 750, Silver Spring, MD 20910, (888)702-1687, www.alarm.org
- Understanding and Servicing Alarm Systems Third Edition, 0-7506-7206-4, Butterworth-Heinemann (Reed Publishing), 313 Washington Street Newton, MA 02158-1626, www.bh.com

Part IV.

Penalties and Refund Policies for all Examinations:

- Failure to appear- Any candidate who fails to appear for an examination shall forfeit ALL fees paid in connection with that examination.
- 2. Failing Examination- Any candidate who fails an examination cannot sit for re-examination for a period of ten (10) days from the date of last examination or for a time period as specified by the Board.
- 3. Rescheduling- You may cancel and reschedule an examination appointment without forfeiting your fee if your cancellation notice is received 2 days before the scheduled examination date.

Note: A voice mail message is not an acceptable form of cancellation. Please use the internet, automated telephone system, or call PSI and speak to a Customer Service Representative.

- 4. Illness- If you are too ill to take an examination on the scheduled date, you may submit a letter from your doctor or hospital substantiating your illness (on their letter head) or any other documentation that PSI and or the Board could use in determining your illness.
- 5. Weather- In the event of severe weather, PSI reserves the right to cancel any and all scheduled examinations. In such event PSI will attempt to contact each applicant that day via telephone to reschedule your examination at your



earliest convenience. If they are unable to contact you at that time, they will send a written notice to reschedule the next business day.

Part V.

Required Renewal of Application Forms:

All applicants shall update their applications after 90-days if the applicant has not sat for and passed each part of his or her examination or has been rescheduled for an examination during the 90-day period and has not sat through an examination. This application must be filled out completely and legibly and signed under pains and penalties of perjury.



Part VI.

First Time Candidate Fees:

Applicants must pay the fee by cashier's check or money order only, payable to PSI.

		**PSI	Examin	Examination Administration Fee			
	*Total PSI Fee Per	Application Processing	Trade	Trade Business Practical			
	Candidate	Fee				Processing Fee	
Master Electrician	\$267	\$75	\$80	\$55		\$57	
Journeyman Electrician	\$222	\$60	\$80		\$55	\$27	
Systems Contractor	\$267	\$75	\$80	\$55		\$57	
Systems Technician	\$222	\$60	\$80		\$55	\$27	

^{*}Fee is a sum of all fees broken down at right

^{***}MA License Application Processing Fee is non-refundable.

	MA
	License
	Fee
Master Electrician	\$135
Journeyman Electrician	\$90
Systems Contractor	\$135
Systems Technician	\$90

Effective August 11, 2004. The MA License Fee is charged to the candidate at the Test Center upon passing the examination. Please be prepared to pay this fee in order to obtain your license. Payment may only be in the form of Money Order, Cashier's Check, Company Check, Mastercard, or Visa. Cash and Personal Checks are not accepted. Please make the Money Order, Cashier's Check, or Company Check payable to PSI.

Re-exam Candidate Fees:

Applicants for reexamination must pay the fee by cashier's check or money order only, payable to PSI.

		Re-examination Fee			
	*Total PSI Re- exam Fee Per Candidate	Trade	Business	Practical	
Master Electrician	\$135	\$80	\$55		
Journeyman Electrician	\$135	\$80		\$55	
Systems Contractor	\$135	\$80	\$55		
Systems Technician	\$135	\$80		\$55	

^{*} Fee is a sum of all fees broken down at right.

Re-exam Fees are non-refundable.

All fees and completed forms shall be sent to:
PSI Examination Services
Attn: MAEL
3210 E Tropicana Ave
Las Vegas, NV 89121

Money Order or Cashier's Check only



WWW.PSIEXAMS.COM

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^{**}PSI Application Processing Fee is good for one year. If you do not test within one year, you must pay this fee again.



Commonwealth of Massachusetts

Division of Professional Licensure

239 Causeway Street • Boston, Massachusetts 02114 <u>www.mass.gov/reg/boards/el</u>

BOARD OF STATE EXAMINERS OF ELECTRICIANS

RICHARD A. FREDETTE

Ex. Ex. Cer	mpleted by Vendor/Board Date Result rt. Date rt. No		EAI	ECOTIVE DIRECTOR					
		<u>App</u>	olicatio	n for Exa	mina	<u>ation</u>			
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	Residence (street Address)								
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You	ur Application May Be <i>RETURNE</i>	D if you f	ail to answer	any of the ques	tions bel	low:			
1.	Are you applying for renewal or	flicensure	by reexamin	ation? Yes	□ No □				
2.	Has a licensing/certification be action against your license(s)?			ited States or an	y country	y or foreign jurisd	iction tak	en any o	disciplinary
	If yes, please state the details	(use a sep	arate sheet i	f necessary):					
3.	Are you the subject of pendi country or foreign jurisdiction?			by a licensing/c	ertificati	on board located	in the Ur	nited Sta	tes or any
	If yes, Please state the details	(use a sep	arate sheet i	f necessary):					
4.	Have you ever voluntarily surre or any country or foreign jurisc			rofessional licens	e to a lic	ensing/certification	n board i	n the Un	ited States



If yes, please state the details (use a separate sheet if necessary): _

5.	Have you ever applied for and been Yes ☐ No ☐	denied a profession	al license in the	United States o	r any country of for	eign jurisdiction?	
	If yes, please state the details (use	a separate sheet if	necessary):				
6. Have you ever admitted to or been convicted of a felony or misdemeanor in the United States or any country or for jurisdiction? Yes No I lf yes, please attach necessary documentation of case outcome, resolution and disciplinary status (if any). In some case may be advantageous to submit a sealed CORI.							
Ī	Current Employer/Company		ployer Address		MO/DAY/YR	Employed	
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ગ	ease sign below in acknowledgement	t of the following st	atements:				
	I understand that I have the right the within 30-days of the date of examulation I understand that if PSI reviewed in findings I may file an appeal befor I understand that I have the right State Examiners of Electricians, we items/questions that are to be revito an appeal I understand that if I need a copy me, such a request must be ma (documented) within the time allot I understand that applicants who appeal must be filed in writing, we arequest within the time allotted I certify, under the pains and per licensure is truthful and accurate. Massachusetts Board of State Examicense issued to me in accordance best of my knowledge and belief, I	mination my examination que te the Board to appeal PSI's de- ithin 30-days of the iewed and failure to of the Review of ar de within 30-days tted may jeopardize receive a rejection ithin 30-days from may jeopardize my nalties of perjury, to I understand that miners of Electrician with Massachusetts	estions but maint cisions and that e date of my rej make such a red of the date of e my right to rev n of application the date of Reje right to an appet hat the informat the failure to p ns to deny my ri s Law. I further	my appeal sha ection notice f quest within the core Notice in a examination. view my examir notice may fi ection of Application I have provide accurate ght to sit as a attest that, pu	ing score and I still II be made in writ rom PSI. In my apporting allotted may addition to the one Any failure to manation score for a sele an appeal beforeation Notice and failure and failure to manation score for a sele an appeal before at the information may be candidate or to sursuant to M.G.L.c.6	disagree with their ing to the Board of eal I must state the jeopardize my right previously given to ke such a request econd time re the Board. Said ailure to make such his application for the grounds for the spend or revoke a	
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The Commonwealth of Massachusetts **Division of Registration**

239 Causeway Street • Boston, Massachusetts 02114

BOARD OF STATE EXAMINERS OF ELECTRICIANS (617) 727-9931

CERTIFICATE OF SCHOOL EXPERIENCE

TO THE STATE EXAMINERS OF ELECTRICIANS:

In connection with my application for a journeyman electrician's license, I submit the following certificate of experience which I obtained while attending school. Name of Applicant - Type or Print Address Signed Name of Applicant Date THE FOLLOWING IS TO BE COMPLETED BY SCHOOL OFFICIALS Subject to the penalties set forth in Section 5 of Chapter 141 of the General Laws, I subscribe to and vouch for the statement made by Name of Applicant - Type or Print Address In the application for examination for a journeyman electrician's license that the student named above did attend. Name of School - Type or Print From During that time the student successfully completed hours of experience in electrical shop performing the actual work defined in Chapter 141, under the direct supervision of a licensed electrician. (Do not include cooperative work experience.) The student successfully completed _____ hours of electrical related instruction under the direct supervision of a licensed electrician. (Do not include cooperative work experience.) The student successfully completed _____hours of cooperative work experience under the direct supervision of a licensed electrician performing the work described in Section 1 of Chapter 141 of the General Laws and pursuant to the provision of Section 8. **SEE REVERSE** FOR BOARD USE ONLY Hours of Experience Hours of Electrical Hours of Cooperative



_____ Years ___

IN STATE-APPROVED ELECTRICAL PROGRAM

Name of Designated School Official - Type or Print	Title	
Signed Name of Designated School Official	(Date)	
Name of School Designated Licensed Electrical Instructor		
Instructor's Electrical Licensed Number		
Signature of School Designated Licensed Electrical Instructor		

IMPRINT SCHOOL SEAL HERE

General Laws, Chapter 141

Section 9. Any person applying for a journeyman's license and making any misstatement as to his experience or other qualifications, or any person, firm or corporation subscribing to or vouching for any such misstatement, shall be subject to penalties set forth in.

THIS FORM IS TO BE USED IN EVERY CASE IN WHICH THE APPLICANT RELIES ON SCHOOLING IN LIEU OF WORKING AT THE TRADE FOR THE REQUIRED YEARS OF PRACTICAL EXPERIENCE (THREE YEARS, OR 6,000 HOURS, FOR THOSE ENTERING THE BUSINESS BEFORE 9/1/81; OR 8,000 HOURS, FOR THOSE ENTERING THE BUSINESS ON OR AFTER 9/1/81.)



The Commonwealth of Massachusetts

State Examiners of Electricians

239 Causeway Street • 5th Floor • Boston, Massachusetts 02114

To the State Examiners of Electricians: In connection with my application for examination for a journeyman electrician/technician license, I submit the following certificate to vouch for my statements as to my experience. (Signature of Applicant) (Address) The following information is to be filled out by the licensed electrician. To the State Examiners of Electricians: Subject to the penalties set forth in Section 5 of Chapter 141 of the General Laws of Massachusetts, I hereby subscribe to and vouch for the statement made by (Name of Applicant) (Please Print) in his application for examination for a journeyman electrician/technician license that he was employed by: (Address of Employer) (Name of Employer) from ____/___/19___ * to ____/19___ * <u>Separate sheets must be completed for each date range</u>. (Date of Employment) (Date of this Certificate or Date of Termination) in the capacity of_____ (Electrician's Apprentice, Helper of other Rating) and that this employment amounted to a total accumulated time of _____years and _____months or____ hours*** Such employment consisted of installing _ (Describe nature of work in detail) on a (please check one) full time _____ or part time _____ basis and _____ % consisted of work for which a license is required by law, and was performed under the direct personal supervision of licensed journeyman/systems technician. (If work was "part-time" explain in detail on the reverse side of this sheet listing all positions held by the applicant within the dates stated above including names, addresses and dates.) Can you produce payroll records for this person? Yes____ No____ (check one) __ by _____ (Signature of Licensed Professional) (Name of Applicant's Employer) Holder of License No.___ _____ Holder of License No.____ (Type Class and No.) (Type Class and No.) (_____) ____ Telephone Number Telephone Number GENERAL LAWS, TER. ED. CHAPTER 141 Section 9. Any person applying for a journeyman/technician license and making any misstatement as to his experience or other qualifications, or any person, firm or corporation subscribing to or youching for any such misstatement, shall be subject to the penalties set forth in Section 5. (A fine of not less than ten or more than one hundred. Subsequent offenses. A fine of \$50 to \$500 or imprisonment for six months.) THIS FORM IS TO BE USED IN ALL CASES FOR CERTIFYING PRACTICAL EXPERIENCE. ADDITIONAL FORMS WILL BE MAILED UPON REQUEST.

*** Please show actual breakdown of overtime hours on reverse side of this employment form is submitting proof of experience on an hourly basis, such as the month, day, year and actual working hours being certified to towards the 8,000- hour requirement.



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Fax (702)) 932-2666 NG DEPARTMENT		
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PHONE NUMBER:			
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